Electronic Version

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Claims

[c1] What is claimed is:

1.A wafer grinding apparatus comprising:

a wafer-transporting device for transporting a wafer comprising:

at least a suction pad having a first surface and a second surface, the second surface being flexible for sucking the wafer; and

a transporting mechanism connected to the first surface of the suction pad for transporting the wafer;

a first nozzle for ejecting a first liquid to the first surface of the suction pad for cleaning the first surface; and

a second nozzle for ejecting a second liquid to the second surface of the suction pad and the wafer for cleaning the second surface and the wafer.

[c2] 2.The wafer grinding apparatus of claim 1 further comprising at least an air intake line, and an air suction device connected to one end of the air intake line for pumping air.

[c3] 3.The wafer grinding apparatus of claim 2 wherein the suction pad comprises a pedestal positioned on the transporting mechanism and contains at least a first

opening connected to another end of the air intake line.

[c4] 4.The wafer grinding apparatus of claim 3 wherein the suction pad further comprises a flexible suction tray located on the pedestal and contains at least a second opening communicating with the first opening, and the wafer is sucked by the suction pad through vacuum suction when the air suction device pumps air.

[c5] 5.The wafer grinding apparatus of claim 3 wherein the suction pad further comprises a plurality of equally spaced flexible suction trays located on a peripheral region of the pedestal, each of the flexible suction trays comprises at least a second opening communicating with the first opening, and the wafer is sucked by the suction pad through vacuum suction when the air suction device pumps air.

[c6] 6.The wafer grinding apparatus of claim 3 wherein the suction pad further comprises at least an elastic pad positioned on the pedestal and contains at least a second opening communicating with the first opening, and the wafer is sucked by the suction pad through vacuum suction when the air suction device pumps air.

[c7] 7.The wafer grinding apparatus of claim 3 wherein the suction pad further comprises at least an elastic ring po-

sitioned on the pedestal.

[c8] 8.The wafer grinding apparatus of claim 7 wherein the suction pad further comprises at least an elastic pad positioned on portions of the pedestal not covered by the elastic ring.

[c9] 9.The wafer grinding apparatus of claim 7 wherein the suction pad further comprises a radial elastic pad positioned on portions of the pedestal not covered by the elastic ring.

[c10] 10.The wafer grinding apparatus of claim 1 further comprising at least a first table and a second table for situating the wafer.

[c11] 11.The wafer grinding apparatus of claim 10 wherein the wafer-transporting device is utilized for moving the wafer from the first table to the second table.

[c12] 12.The wafer grinding apparatus of claim 11 further comprising a parking region for parking the suction pad.

[c13] 13.The wafer grinding apparatus of claim 12 wherein when the suction pad stays in the parking region, the first surface and the second surface of the suction pad are cleaned respectively by the first nozzle and the second nozzle.

[c14] 14.The wafer grinding apparatus of claim 12 wherein when the suction pad passes through the parking region, the first surface of the suction pad and the wafer are cleaned respectively by the first nozzle and the second nozzle.

[c15] 15.The wafer grinding apparatus of claim 11 wherein the first table is selected from a group consisting of a positioning table, a grinding table, a spinner table, and a cassette supporting table.

[c16] 16.The wafer grinding apparatus of claim 11 wherein the second table is selected from a group consisting of a positioning table, a grinding table, a spinner table, and a cassette supporting table.

[c17] 17.The wafer grinding apparatus of claim 1 wherein the wafer grinding apparatus is utilized to grind a backside of the wafer for preventing cross-shaped flaws from forming in the wafer.

[c18] 18.The wafer grinding apparatus of claim 1 wherein the second nozzle comprises a spray nozzle.

[c19] 19.The wafer grinding apparatus of claim 1 wherein the first liquid and the second liquid both comprise water.

[c20] 20.The wafer grinding apparatus of claim 1 wherein the

transporting mechanism comprises a T-shaped arm.